

# THE MINERAL INDUSTRY OF SWITZERLAND

By Harold R. Newman

The reserves of the small deposits of metalliferous ores that existed in Switzerland have long since been depleted, and metal mining has ceased. In 1998, mineral production was limited mainly to commodities required for construction, including cement, clays, gravel, gypsum, lime, and sand. The mineral industry was largely controlled by the Government and was owned either privately or by regional governments (cantons). Cantonal or communal governments granted mining or processing licenses and directly operated electrical generating facilities, water resources, gas utilities, and local transportation facilities.

Metal processing was confined to the production of primary and secondary aluminum, secondary lead, and steel. All metal production in Switzerland was from either imported raw materials or scrap. Switzerland relied on imports for many mineral commodities because of self-imposed environmental restrictions and lack of natural resources. Concerns about environmental pollution reportedly caused the adoption of a policy to gradually curtail or perhaps even cease smelting activities. (See table 1.)

More than one of every two francs earned by the Swiss economy comes from abroad. Switzerland was among the leading exporters for services (fifth ranking) and goods (ninth ranking), in general, in the world. The country was a major trading partner of the European Union (EU), being the third largest supplier to the EU, after the United States and Japan. At

the same time, it was the EU's second most important importer after the United States. Other major EU trading partners were, in order of importance, Germany, France, and the United Kingdom.

Alusuisse-Lonza Holding AG was the only aluminum producer in Switzerland. A significant amount of primary aluminum for downstream production came from the wholly Swiss-owned Icelandic Aluminium Co. in Iceland and the jointly Swiss-Norwegian-owned Sor-Norge Aluminium A/S in Norway. A secondary lead smelter produced antimonial and calcium lead and a small amount of soft solder in bars from recycled batteries. (See table 2.)

The steel industry in Switzerland was characterized by a relatively small domestic market and a high degree of specialization. The existing plants accounted for about 50% of domestic consumption. About 30% of this consumption consisted of rebar and reinforcing mesh. Von Roll Group was expected to intensify production of rebar at its newly modernized and expanded 650,000-metric-ton-per-year plant in Gerlafingen.

Switzerland was a large diamond center. Cutting, polishing and international trading activities accounted for a turnover of more than a billion dollars. The country's international trade in diamonds for 1997-98 is listed in tables 3 and 4. The country's export trade in watches was also very significant as listed in table 5.

TABLE 1  
SWITZERLAND: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/		1994	1995	1996	1997	1998
<b>METALS</b>						
Aluminum:						
Primary	metric tons	24,172 3/	20,726 3/	26,592 3/	27,339 r/ 3/	32,062 3/
Secondary	do.	6,200 3/	10,700 3/	6,000	6,000	6,000
Iron and steel:						
Pig iron		110 3/	100	100	100	100
Steel, crude		800	1,000	1,000	1,000	1,000
Semimanufactures, rolled products		700	700	700	700	700
Lead, refined, secondary	metric tons	6,350 3/	6,400	6,200	6,000	7,600
<b>INDUSTRIAL MINERALS</b>						
Cement, hydraulic		4,000	4,000	3,800	3,800	3,600
Gypsum		298 3/	300	300	300	300
Lime		40	35	35	35	35
Nitrogen, N content of ammonia		30	30	30	30	30
Salt		259	300	300	300	300
Sulfur, from petroleum refining	metric tons	3,000	3,000	4,000	5,000	4,500
<b>MINERAL FUELS AND RELATED MATERIALS</b>						
Petroleum refinery products:						
Liquefied petroleum gas	thousand 42-gallon barrels	2,000	2,000	2,000	2,000	2,000
Gasoline	do.	8,500	9,000	9,000	9,000	9,000
Jet fuel	do.	2,000	2,000	2,000	2,000	2,000
Distillate fuel oil	do.	9,500	10,000	9,500	9,500	9,500
Residual fuel oil	do.	5,500	6,000	5,500	5,500	5,500
Bitumen	do.	800	800	800	800	800
Refinery fuel and losses	do.	2,200	2,000	2,000	2,000	200
Total 4/	do.	30,500	31,800	30,800	30,800	30,800

r/ Revised.

1/ Table includes data available through March 1999.

2/ In addition to the commodities listed, a variety of crude construction materials (common clay, sand, and gravel, and stone) were produced, but output was not reported, and available general information was inadequate to make reliable estimates of output level.

3/ Reported figure.

4/ Total of listed products only.

TABLE 2  
SWITZERLAND: STRUCTURE OF THE MINERAL INDUSTRY IN 1998

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum		Alusuisse-Lonza Holding AG	Smelter at Stag	48
Cement		Bundr Cementwerke AG (Holderbank Management and Consulting Ltd. 100%)	Plant at Untervaz	700
Do.		Cementfabrik Holderbank AG	Plant at Rekingen	700
Lead, secondary		Metallum AG	Smelter at Pratteln	13
Refinery, petroleum	barrels per day	Reffinerie du Sud-Ouest SA (Compagnie Francaise des Petroles 49%, and British Petroleum 49% are major share holders.)	Refinery at Collombey	40,000
Do.	do.	Reffinerie de Cressier SA (Kninklijke Nederlandsche Petroleum Maatschappij NV 100%)	Refinery at Cressier	36,000
Salt		Zentralbureau des Vereins der Schweizerischen Rheinsalinen (Government 100%)	Saline at Schweizerhalle	350
Do.		La Societe des Mines (Canton of Vaud 100%)	Saline at Bex	50
Steel		Monteforno Acciaierie e Laminatoi SA (Von Roll Group 93.6%)	Plant at Bodio	380
Do.		Von Roll Group	Plant at Gerlafingen	650
Do.		Von Moss Stahl AG	Plant at Emmenbrucke	300

TABLE 3  
SWITZERLAND: EXPORTS OF DIAMOND

(Thousand dollars)

Destinations	1997	1998
Sorted, unworked or simply sewn, cleaved, or bruted:		
Israel	570,105	305,472
South Africa	46,606	NA
United Kingdom	221,236	NA
Total	847,036	326,879

NA Not available.

Source: Basel Magazine, April 1999, no. 1, p. 141, London, United Kingdom.

TABLE 4  
SWITZERLAND: EXPORTS OF DIAMOND

(Thousand dollars)

Destinations	1997	1998
Natural rough, unsorted, and sorted, unworked or simply sawn, cleaved, or bruted:		
Israel	14,106	NA
South Africa	NA	NA
United Kingdom	977,821	1,293,426
Total	1,224,940	1,340,129

NA Not available.

Source: Basel Magazine, April 1999, no. 1, p. 141, London, United Kingdom.

TABLE 5  
SWITZERLAND: EXPORTS OF WATCHES

(Thousand dollars)

Destinations	1997	1998
France	303,106	352,141
Germany	466,184	496,616
Great Britain	242,581	256,285
Hong Kong	959,489	752,555
Italy	457,971	542,265
Japan	505,590	543,301
Singapore	305,728	214,503
Spain	143,547	202,901
United Arab Emirates	116,701	116,160
United States	813,458	928,834
Others	1,421,670	1,409,738
Total	5,736,025	5,816,298

NA Not available.

Source: Basel Magazine, April 1999, no. 1, p. 141, London, United Kingdom.